

FISHES COLLECTED BY THE PEARY RELIEF EXPEDITION OF 1899.

BY HENRY W. FOWLER.

Mr. C. F. Silvester kindly placed this collection of fishes in my hands for determination. In some cases the specimens represent localities not given by previous writers. Two species are apparently new. The collection is small, though fairly representative of the meagre fish-fauna of such high latitudes in Greenland. At present it is contained in the Museum of Princeton University, with the exception of a series of duplicates presented to the Academy. The writer is indebted to Princeton University and to Mr. Silvester, for assistance and favors in framing the report.

COTTIDÆ.

Icelus bicornis (Reinhardt).

One example, 63 mm. long, from Foulke Fjord, in 35 fathoms, on August 4.

Three examples, 31 to 63 mm. long, from Ulriks Bay, in 7 to 25 fathoms, August 11.

Two examples, 31 to 67 mm. long, from Grandville Bay, in 10 to 22 fathoms, on August 18.

Four examples, 68 to 90 mm. long, from Cape Chalon, in 27 fathoms, on August 19.

One example, 39 mm. long, from Bardin Bay, on August 20.

One example, 38 mm. long, from Ulriks Bay, on August 24.

Four examples, 52 to 74 mm. long, from Karna, in 30 to 40 fathoms, on August 24.

Triglops pingeli Reinhardt.

One example, 69 mm. long, from Bardin Bay, on August 22.

Myoxocephalus grœnlandicus (Valenciennes).¹

Two examples, 220 to 230 mm. long, dredged in 10 to 15 fathoms at Saunder's Island, on August 3.

One example, 175 mm. long, dredged in 7 to 25 fathoms in Ulriks Bay, on August 11.

The smallest example differs in lacking the warty prominences

¹ The Academy has a large example obtained by the Peary Relief Expedition of 1892, at North Water, in northwest Greenland.

on the parietal region, which are well developed in the largest. All have a pore or slight slit after the last gill-arch, and the interorbital space nearly as wide as the eye is long. Scabrous tubercles on back and sides fewer in the smallest example.

***Gymnocanthus tricuspis* (Reinhardt).**

One example, 188 mm. long, from Godhavn.

One example, 52 mm. long, from Upernavik, in 10 to 15 fathoms, in August.

One example, 66 mm. long, from Grandville Bay, in 20 to 40 fathoms, August 18.

Two examples, 62 to 79 mm. long, from Bardin Bay, on August 20.

One example, 78 mm. long, from Karna, in 30 to 40 fathoms, on August 24.

Nine examples, 53 to 123 mm. long, from Robertson Bay, in 5 to 40 fathoms, on August 24.

Two examples from Saunder's Island, in 10 to 15 fathoms, on August 3.

CYCLOPTERIDÆ.

***Eumicrotremus spinosus* (Müller).**

One example, 25 mm. long, from Etah, in 5 fathoms, in August.

Two examples, 40 to 72 mm. long, without data.

Two examples, 38 to 70 mm. long, from Grandville Bay, in 20 to 40 fathoms, on August 18.

Also two examples, 36 to 42 mm. long, from Grandville Bay, on August 18.

Two examples, 33 to 35 mm. long, from Karna, in 20 to 40 fathoms, on August 24.

Four examples, 25 to 42 mm. long, from Robertson's Bay, in 5 to 40 fathoms, on August 24.

***Lethotremus mcalpini* sp. nov. Fig. 1.**

Head $2\frac{3}{4}$; depth about $1\frac{7}{8}$; D. VII, 9; A. 10; P. about 22; head width about $2\frac{1}{8}$ in head and trunk; snout (in profile) 4 in head; eye (in profile) about 3; mouth width about $1\frac{1}{2}$; interorbital about 2; height of first dorsal $2\frac{2}{3}$; height of second dorsal 2; height of anal $2\frac{1}{3}$; least depth of caudal peduncle $3\frac{1}{3}$; caudal $1\frac{1}{2}$; upper longest pectoral ray $2\frac{1}{4}$; length of disk $1\frac{2}{5}$.

Body very robust, greatly swollen anteriorly, so that greatest width about equal to greatest depth, or nearly half length without caudal. Greatest width falls midway in region between base of uppermost pectoral ray and anal origin. Contour of body in lateral

profile generally ovoid. Caudal peduncle compressed, its length $\frac{3}{4}$ its least depth.

Head large, broad, upper profile convex, more inclined than lower. Snout short, broad, convex over surface, its length about half its width. Eye large, circular, elevated, without free edges, and slightly anterior. Mouth broad, terminal, rather low, and

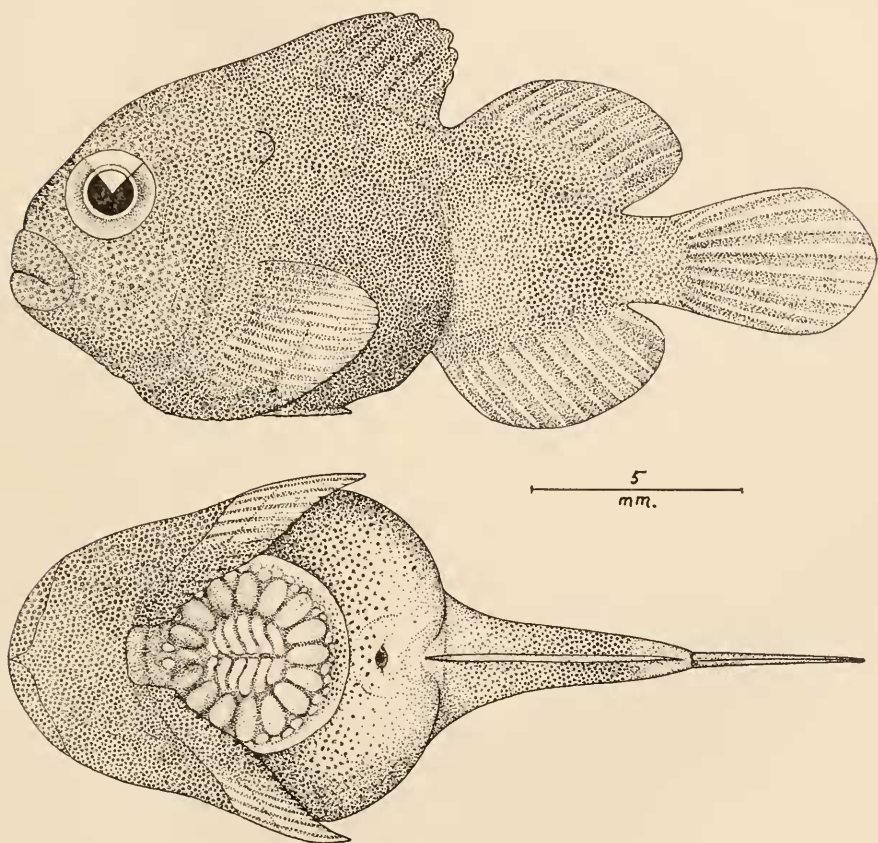


Fig. 1.—*Lethotremus mecalpini* Fowler. (Type.)

broad fleshy lips similar. Jaws equal. Maxillary extends but slightly beyond front edge of eye. Dentition as a trenchant firm cutting-edge in each jaw, similar throughout most its extent, and edge only feebly notched or with but slight dentate appearance. Apparently no other teeth, though upper surface of mouth and tongue covered with small tubercles. Tongue large, broad, thick,

fleshy, front edge free. Upper and lower buccal membranes well developed. Nostrils near together, anterior in slight cutaneous tube, and posterior simple pore with simple cutaneous rim. In position anterior nostril about opposite middle of eye and posterior about opposite upper rim of eye. Interorbital broad and slightly convex.

Gill-opening high, mostly above upper level of eye, and small, its aperture not more than half of eye. Downwards and below to disk skin forms slight fold.

Skin perfectly smooth and without any conspicuous or evident pores, also without spines.

Dorsals separated by a deep notch, though their fleshy bases at least continuous. First dorsal smaller and more rounded than second, edge also slightly notched and of quite fleshy texture. Its insertion about over front of gill-opening. Second dorsal with rays more free or defined, though simple, and more uniform. Anal like second dorsal. Caudal moderate, rounded. Pectoral moderate, with long and moderately inclined base and composed of simple rays. Pectoral extends as far posteriorly as disk. Latter quite large, circular, and not ensheathed anteriorly by lower pectoral rays. Edge of disk entire. Vent close behind disk.

Color in alcohol largely pale brownish, fins paler or more or less whitish. Under a lens, head and trunk almost everywhere finely dotted with minute specks of darker shade. They also completely cover first dorsal, together with upper and lower regions of pectoral. On posterior ventral region darker dots quite sparse or inconspicuous. Iris pale slaty.

Length 21 mm.

Type, No. 2,950, Museum of Princeton University. Though the precise locality in Greenland is lost, Mr. Silvester thinks the specimen was probably taken in Ulriks Bay.

Only the type known. It is very similar to *Lethotremus muticus* Gilbert, from the Aleutian Islands, differing in the narrow notch between the dorsal fins, fewer dorsal rays, larger vertical fins, larger ventral disk, uniformly dotted coloration, etc. It agrees, however, in the smooth skin and dorsal spines. Gilbert gives the eye as very large, $2\frac{1}{3}$ to $2\frac{1}{2}$ in head, though his figure indicates that at the very least it is 4. His largest example was 30 mm. long.²

(Named for Mr. Charles W. McAlpin, to whom the University is indebted for assistance in securing the present collection.)

² *Rep. U. S. F. Com.*, XIX, 1893 (1895), p. 449, Pl. 31. Unimak Pass, Alaska.

Lethotremus armouri sp. nov. Fig. 2.

Head $2\frac{1}{2}$; depth about $1\frac{7}{8}$; D. v, 11; A. 11; P. about 18; head width about $2\frac{1}{5}$ in head and trunk; snout (in profile) $3\frac{2}{5}$ in head; eye (in profile) $2\frac{1}{2}$; mouth width $1\frac{2}{5}$; interorbital about 2; height of first dorsal $1\frac{4}{5}$; height of second dorsal about 2; height of anal $1\frac{7}{8}$; least depth of caudal peduncle $2\frac{2}{3}$; caudal $1\frac{1}{4}$; upper longest pectoral ray $1\frac{4}{5}$; length of disk $1\frac{1}{4}$.

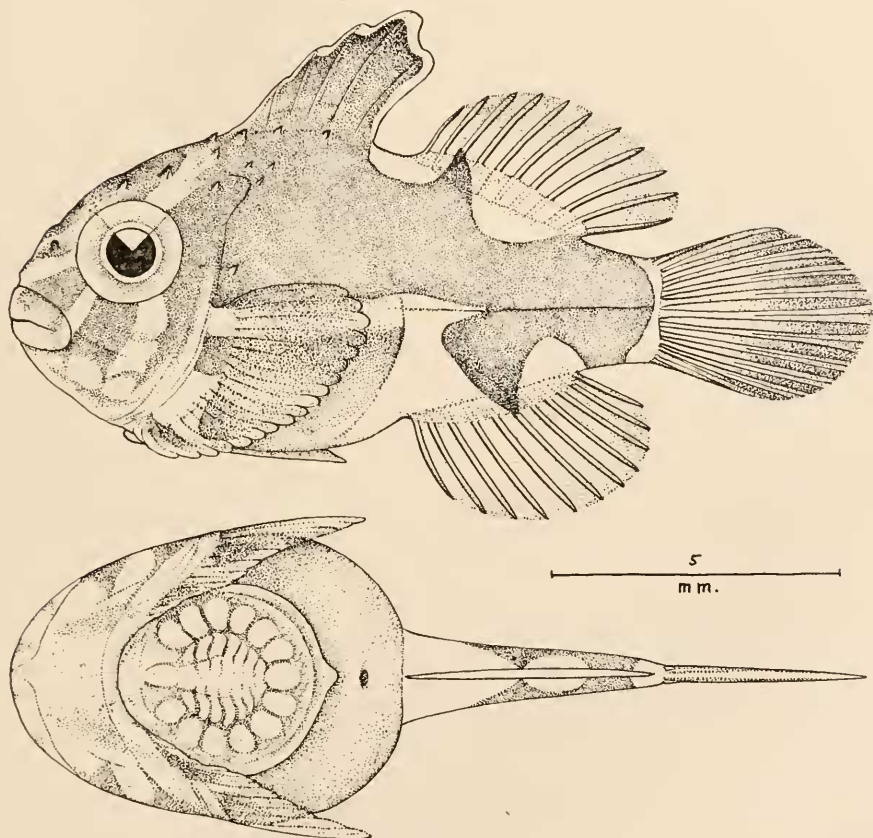


Fig. 2.—*Lethotremus armouri* Fowler. (Type.)

Body robust, swollen or rounded anteriorly, though greatest width not quite equal to greatest depth, or $2\frac{1}{3}$ in head and trunk without caudal. Greatest width falls at base of uppermost pectoral ray. Contour of body in lateral profile generally ovoid. Caudal peduncle compressed, its length about $\frac{3}{4}$ its least depth.

Head large, wide, upper profile generally convex, more inclined than lower. Snout short, wide, convex over surface, its length about $\frac{2}{3}$ its width. Eye large, circular, slightly anterior. Mouth broad, terminal, rather low, and broad fleshy lips similar. Jaws equal. Maxillary extending very slightly beyond front edge of eye. Each jaw with trenchant firm cutting-edge, feebly notched or with slight dentate appearance. Inside mouth skin apparently smooth. Tongue thick, fleshy, front edge free. Upper and lower buccal membranes slight. Nostrils near together, lower in slight tube about opposite middle of eye, and posterior simple pore about opposite upper rim of eye. Interorbital broad and slightly convex.

Gill-opening high, mostly above upper level of eye, and small aperture about half of eye. Downwards and below, skin forms slight fold.

Skin almost everywhere, except upper surface of head and front of back, which furnished with a number of bony tubercles, smooth and without any pores.

Dorsals entirely separated, space between about half of eye. First dorsal much shorter, though higher, than second, and its edge slightly notched. Spinous dorsal inserted over front of gill-opening. Second dorsal and anal similar, rays simple, well defined, and more or less uniform. Caudal moderate, rounded. Pectoral moderate, with long and moderately inclined base, and formed with simple rays. Pectoral reaches far posteriorly as disk. Latter quite large, circular, and not ensheathed in front by pectoral rays, edge entire. Vent close behind disk.

Color in alcohol largely brownish, contrasted with whitish markings. Color-pattern may best be understood by an examination of the accompanying figure. On head whitish is left radiating as several streaks from eye. First dorsal largely dusky-brown, with a white edge. Vertical fins otherwise pale or whitish. Disk pale. Iris pale slaty.

Length 15 mm.

Type, No. 2,951 Museum of Princeton University. Upernivik, in 8 to 10 fathoms, Greenland. August 1, 1899.

Paratypes, Nos. 2,952 to 2,954, Museum of Princeton University. Elah, in 5 fathoms, Greenland. August, 1899.

Related to *Lethotremus vinolentus* Jordan and Starks,³ differing in the fewer spines, more numerous dorsal and anal rays, variegated

³ *Proc. Cal. Acad. Sci.*, 1895, p. 827, Pl. 94. Puget Sound, near Seattle, Wash.

color-pattern, etc. My examples are all similar and the paratypes but slightly smaller.

(Named for Mr. George A. Armour.)

LIPARIDIDÆ.

Liparis tunicatus Reinhardt.⁴

One example, 18 mm. long, from Etah, in 5 fathoms, in August.

One example, 82 mm. long, from Foulke Fjord, in 35 fathoms.

Three examples, 15 to 20 mm. long, from Upernavik, in 8 to 10 fathoms, on August 1.

Two examples, 76 to 85 mm. long, from Foulke Fjord, in 35 fathoms, on August 4.

One example, 62 mm. long, from Ulriks Bay, in 7 to 25 fathoms, on August 11.

One example, 48 mm. long, from Bardin Bay, on August 20.

One example, 104 mm. long, from Robertson's Bay, in 5 to 40 fathoms, on August 24.

ZOARCIDÆ.

Lycodalepis polaris (Sabine).

One example, 414 mm. long, from Saunder's Island, in 10 to 15 fathoms, on August 3.

FAUNAL WORKS.

- BAY, E. 1896. Den östgrönlandske Expedition, udført i Aarene 1891-92 under Ledelse af C. Ryder. < *Meddel. Grönland*, XIX, 1896, pp. 52-58. [List of 15 species from Scoresby Sound and Angmagsalik, in east Greenland.]
- COLLETT, ROBERT. 1886. *Aphanopus minor*, en ny Dybvandsfisk af Trichuridernes Familie fra Grönland. < *Christ. Vidensk. Selsk. Forhandl.*, 1886, No. 19, pp. 1-7.
- DRESEL, H. G. 1885. Notes on some Greenland Fishes. < *Proc. U. S. Nat. Mus.*, VII, 1884, pp. 244-258. [List of sixteen species with full notes.]
- FABRICIUS, OTHO. 1780. Fauna Gröenlandica, etc. Hafniæ et Lipsiæ, 1780. pp. 1-452. (Fishes, pp. 125-183, 344.) [Contains descriptions of 45 species, some of which described as new: *Salmo rivalis*, *S. stagnalis*, *Pleuronectes platessoides*, *Cottus scorpioides*, *Blennius punctatus*, *Gadus brosmæ*, *Ophidium viride*.]
- GRAAH, W. A. 1832. Undersøgelse rejse til Ostkysten af Grönland. Kjöbenhavn, 1832, p. 194. [Eight species mentioned from the southern part of the east coast of Greenland.]
- [GÜNTHER, A. 1877. Account of the Fishes collected by Capt. Feilden between 78° and 83° N. Lat., during the Arctic Expedition 1875-6. < *Proc. Zool. Soc. London*, 1877, pp. 293-295, Pl. 32. (Six species listed and *Salmo arcturus* described as new; also 4 species from Godhavn Harbor.)]

⁴I may also note three examples in the collection of the Academy from Godhaab, and one from McCormick Bay, by Dr. B. Sharp in 1892.

Four wholly unarmed examples of *Gasterosteus aculeatus* Linnæus from Godhavn, having 3 to 5 dorsal spines, were received from Dr. I. Hayes.

An example of *Pholis fasciatus* (Schneider), 265 mm. long, was obtained at Godhavn.

- Report on a Collection of Fishes made by Mr. C. Hart during the late Arctic Expedition. < *L.c.*, pp. 475-477, Pl. 50. [Six species from Franklin Pierce Bay and two species from lakes in Discovery Bay.]
- HOLM, G. 1888. Den östgrönlandske Expedition, udført i Aarene 1883-85 under Ledelse af G. Holm. < *Meddel. Grönland*, X, 1888, pp. 54, 81-82. [Seven species listed from Angmagssalik in southern part of east Greenland; notes on Esquimaux food fishes.]
- HOLMQVIST, OTTO. 1899. List of Fishes collected during the Peary Auxiliary Expedition, 1894. < *Ann. Mag. Nat. Hist.* London, (7) III, 1899, pp. 214-223.
- JENSEN, A. S. 1902. Ichthyologiske Studier. < *Vid. Med. Fören.* Kjöbenhavn, 1901 (1902), pp. 191-215. (*Lycodes eudipleurostictus* from West Greenland and *L. ingolfianus* from Davis Straits, described as new, also ten other new fishes from the Arctic Seas.)
- 1904. The North-European and Greenland Lycodinae. < *Dan. Ingolf. Exped.*, II, pt. 4, 1904, pp. 1-99, Pls. 1-10. [Four new forms from the Arctic Seas; *Lycodes reticulatus* var. *macrocephalus* and *Lycenchelys kolthoffi* new species from east and northeast Greenland, respectively.]
- The Fishes of East Greenland. < *Meddel. Grönland*, XXIX, 1904, No. 7, pp. 211-276, Pls. 11-13. [A detailed list of 36 species given, and *Lycodes reticulatus* var. *macrocephalus* and *Lycenchelys kolthoffi* again described as new.]
- JOHANSEN, FRITS. 1912. The Fishes of the Danmark Expedition, collected and described by Fritz Johansen. < *Meddel. Grönland*, XLIV, 1912, pp. 46-375, Pls. 44-46. [A list of 13 species given.]
- KOEFOED, M. EINAR. 1907. Poissons. < *Duc d'Orléans, Croisière Océanographique accomplie a bord de la Belgica dans la Mer du Grönland* 1905. Bruxelles, 1907, pp. 485-500, Pl. 78. [List of six species from east Greenland.]
- LÖNNBERG, E. 1900. The fishes of the Swedish zoological polar expedition of 1900. < *Rev. Internat. Pêche Piscic.*, II, No. 4, St. Pétersbourg, 1900. [A list of 12 species obtained by the Kolthoff Expedition of 1900, in northeast Greenland.] (Not seen.)
- LÜTKEN, CHR. 1875. A Revised Catalogue of the Fishes of Greenland. < *Manual of the Nat. Hist. Geol. Phys. Greenland, etc.*, 1875, pp. 115-122. [This contains a list of 78 species.]
- 1898. The Ichthyological Results. < *Danish Ingolf Exped.*, II, pt. I, 1898, pp. 1-39, Pls. 1-4. [*Raja ingolfiana*, *Cyclothone megalops* and *Macrurus ingolfi* new species.]
- PETERS, W. 1874. Fische. < *Die Zweite Deutsche Nordpolarfahrt in den Jahren 1869 und 1870.* Leipzig, 1870, pp. 169-174, Pl. 1, fig. 3. [Six species from east Greenland, with *Gadus glacialis* and *Salmo hoodii* described as new.]
- REINHARDT, JOHAN. 1857. Naturhistoriske Tillæg til en geografisk og statistisk Beskrivelse af Grönland. Tillæg Nr. 1. Fiske, pp. 20-27. < *Grönland geographisk og statistisk beskrevet af H. Rink.* Kjöbenhavn, 1857. [A list of 69 species.]
- SCORESBY, JR., WILLIAM. 1823. Journal of a voyage to Northern Whale-fishery. Edinburgh, 1823, Appendix No. 3, p. 423. [Four species mentioned from the east coast of Greenland in N. Lat. 70°-75°.]
- SMITT, F. A. 1901. On the genus *Lycodes*. < *Bihang K. Svensk. Vet. Ak. Handl.*, Stockholm, XXVII, Afd. IV, No. 4, 1901, pp. 1-46, one plate.